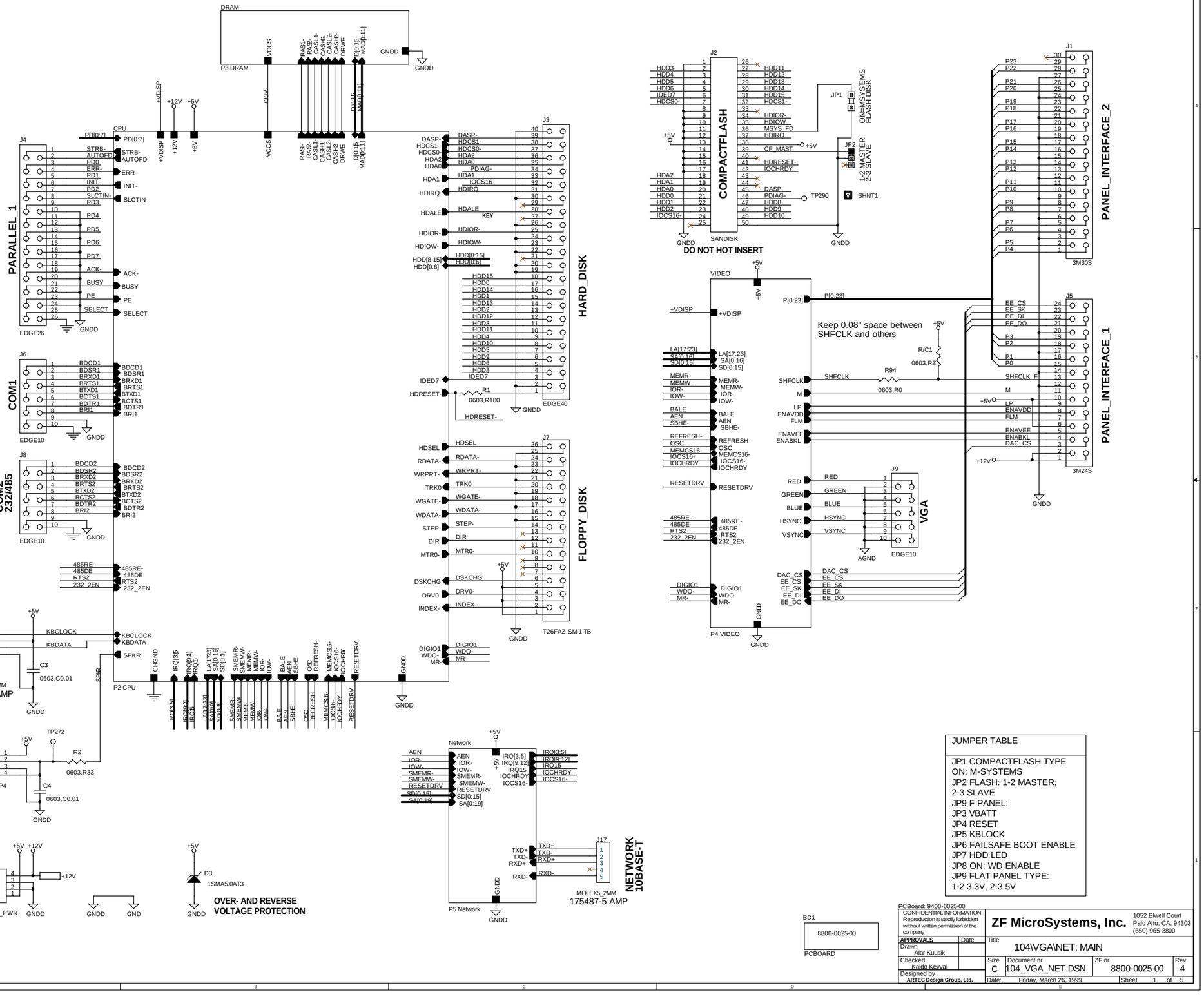
DRAM
P3 DRAM
VCCS
RAS1-
RAS-
CAS1-
CASH1
CASL2-
CASH2-
DRWE
D[0:15]
MAD[0:11]
GNDD
+VDISP
+12V
+5V
+3.3V
CPU
P2 CPU
PARALLEL_1
EDGE26
PD[0:7]
STRB-
AUTOFD
ERR-
INIT-
SLCTIN-
ACK-
BUSY
PE
SELECT
COM1
EDGE10
BDCD1
BDSR1
BRXD1
BRTS1
BTXD1
BCTS1
BDTR1
BRI1
COM2
232/485
BDCD2
BDSR2
BRXD2
BRTS2
BTXD2
BCTS2
BDTR2
BRI2
485RE-
485DE
RTS2
232_2EN
KEYBOARD
J10
KBCLOCK
KBDATA
SPKR
C3
0603,C0.01
MOLEX4_2MM
175487-4 AMP
SPEAKER
J12
JUMP4
TP272
R2
0603,R33
C4
POWER_IN
J11
FDD_PWR
D3
1SMA5.0AT3
OVER- AND REVERSE
VOLTAGE PROTECTION
HARD_DISK
J3
EDGE40
DASP-
HDCS1-
HDCS0-
HDA2
HDA0
HDA1
IOCS16-
HDIRQ
HDALE
KEY
HDIOR-
HDIOW-
HDD[8:15]
HDD[0:6]
IDED7
HDRESET-
R1
0603,R100
FLOPPY_DISK
J7
T26FAZ-SM-1-TB
HDSEL
RDATA-
WRPRT-
TRK0
WGATE-
WDATA-
STEP-
DIR
MTR0-
DSKCHG
DRV0-
INDEX-
DIGIO1
WDO-
MR-
NETWORK
10BASE-T
Network
P5 Network
J17
MOLEX5_2MM
175487-5 AMP
TXD+
TXD-
RXD+
RXD-
COMPACTFLASH
J2
SANDISK
DO NOT HOT INSERT
JP1
ON=MSYSTEMS
FLASH DISK
JP2
1-2 MASTER
2-3 SLAVE
TP290
SHNT1
VIDEO
P4 VIDEO
Keep 0.08" space between
SHFCLK and others
R/C1
0603,RZ
R94
0603,R0
SHFCLK
SHFCLK_F
M
LP
ENAVDD
FLM
ENAVEE
ENABKL
DAC_CS
EE_CS
EE_SK
EE_DI
EE_DO
J9
VGA
EDGE10
AGND
PANEL_INTERFACE_2
3M30S
PANEL_INTERFACE_1
3M24S
JUMPER TABLE
JP1 COMPACTFLASH TYPE
ON: M-SYSTEMS
JP2 FLASH: 1-2 MASTER;
2-3 SLAVE
JP9 F PANEL:
JP3 VBATT
JP4 RESET
JP5 KBLOCK
JP6 FAILSAFE BOOT ENABLE
JP7 HDD LED
JP8 ON: WD ENABLE
JP9 FLAT PANEL TYPE:
1-2 3.3V, 2-3 5V
BD1
8800-0025-00
PCBOARD
PCBoard: 9400-0025-00
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1052 Elwell Court
Palo Alto, CA, 94303
(650) 965-3800
APPROVALS
Date
Drawn
Alar Kuusik
Checked
Kaido Kevvai
Designed by
ARTEC Design Group, Ltd.
Title
104\VGA\NET: MAIN
Size
C
Document nr
104_VGA_NET.DSN
ZF nr
8800-0025-00
Rev
4
Date:
Friday, March 26, 1999
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1
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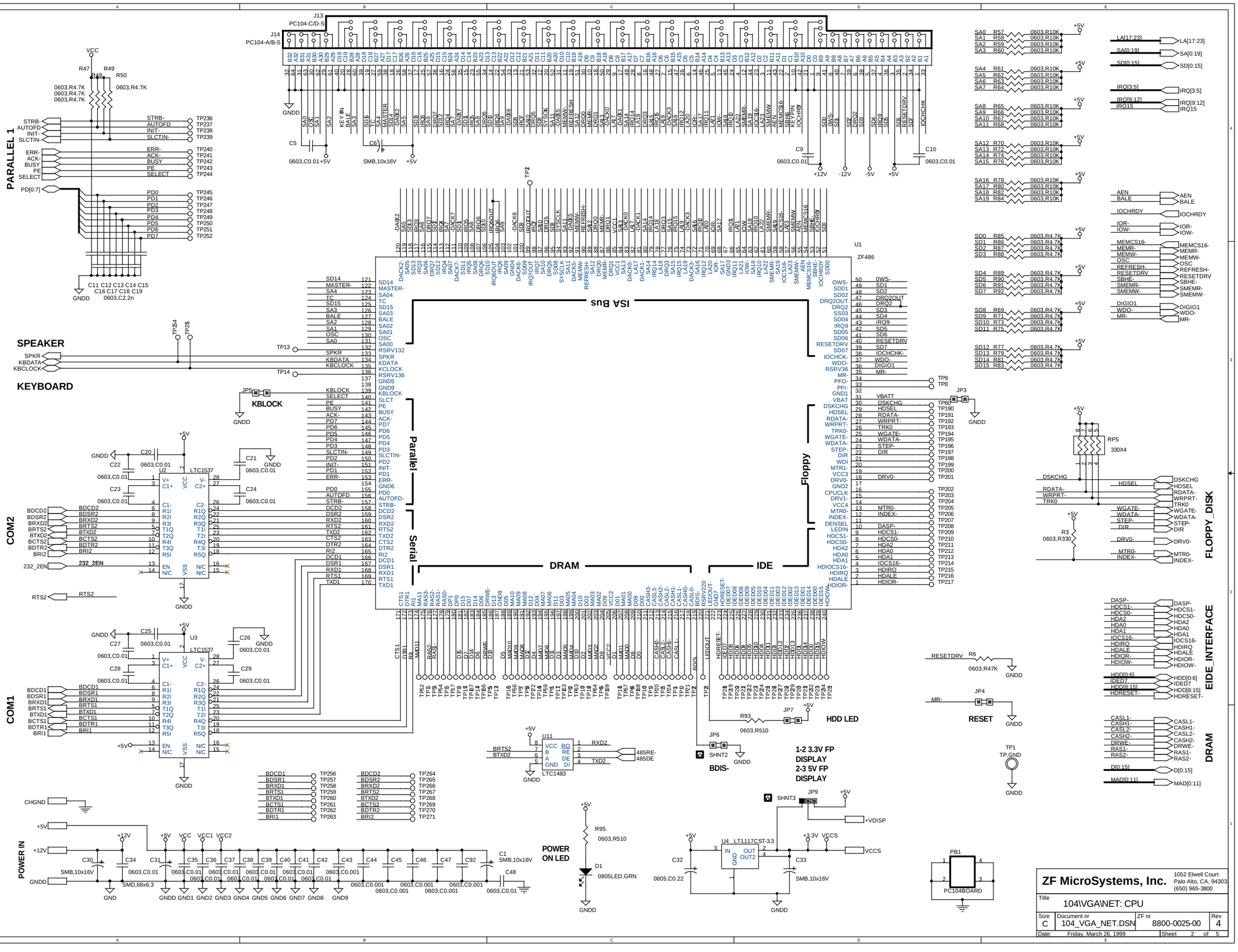
5


PARALLEL 1
SPEAKER
KEYBOARD
COM2
COM1
POWER IN
ISA Bus
Parallel
Serial
Floppy
DRAM
IDE
U1
ZF486
U2
LTC1537
U3
LTC1537
U11
LTC1483
U4
LT1117CST-3.3
HDD LED
BDIS-
1-2 3.3V FP DISPLAY
2-3 5V FP DISPLAY
POWER ON LED
RESET
FLOPPY_DISK
EIDE_INTERFACE
DRAM
PC104-C/D-S
PC104-A/B-S
PC104BOARD
RP5
330X4
R3
0603,R330
R6
0603,R47K
R93
0603,R510
R95
0603,R510
D1
0805LED,GRN
C1
SMB,10x16V
C48
0603,C0.01
C5
0603,C0.01+5V
C6
SMB,10x16V
C9
0603,C0.01
C10
0603,C0.01
C11 C12 C13 C14 C15
C16 C17 C18 C19
0603,C2.2n
C20
0603,C0.01
C21
0603,C0.01
C22
0603,C0.01
C23
0603,C0.01
C24
0603,C0.01
C25
0603,C0.01
C26
0603,C0.01
C27
0603,C0.01
C28
0603,C0.01
C29
0603,C0.01
C30
SMB,10x16V
C34
SMD,68x6.3
C31
0603,C0.01
C35
0603,C0.01
C36
0603,C0.01
C37
0603,C0.01
C38
0603,C0.01
C39
0603,C0.01
C40
0603,C0.01
C41
0603,C0.01
C42
0603,C0.01
C43
0603,C0.001
C44
0603,C0.001
C45
0603,C0.001
C46
0603,C0.001
C47
0603,C0.001
C92
0603,C0.001
C32
0805,C0.22
C33
SMB,10x16V
R47
R48
R49
R50
0603,R4.7K
0603,R4.7K
0603,R4.7K
0603,R4.7K
VCC
GNDD
+5V
+12V
-12V
-5V
+3.3V
VCCS
+VDISP
CHGND
GND
GND1
GND2
GND3
GND4
GND5
GND6
GND7
GND8
GND9
TP2
TP13
TP14
TP25
TP254
TP9
TP8
TP3
TP1
TP.GND
JP5
KBLOCK
JP3
JP4
JP6
SHNT2
JP7
JP9
SHNT3
PB1
LA[17:23]
SA[0:19]
SD[0:15]
IRQ[3:5]
IRQ[9:12]
IRQ15
AEN
BALE
IOCHRDY
IOR-
IOW-
MEMCS16-
MEMR-
MEMW-
OSC
REFRESH-
RESETDRV
SBHE-
SMEMR-
SMEMW-
DIGIO1
WDO-
MR-
DSKCHG
HDSEL
RDATA-
WRPRT-
TRK0
WGATE-
WDATA-
STEP-
DIR
DRV0-
MTR0-
INDEX-
DASP-
HDCS1-
HDCS0-
HDA2
HDA0
HDA1
IOCS16-
HDIRQ
HDALE
HDIOR-
HDIOW-
HDD[0:6]
IDED7
HDD[8:15]
HDRESET-
CASL1-
CASH1-
CASL2-
CASH2-
DRWE-
RAS1-
RAS2-
D[0:15]
MAD[0:11]
RESETDRV
MR-
SD0
SD1
SD2
DRQ2OUT
DRQ2
SD3
SD4
IRQ9
SD5
SD6
RESETDRV
SD7
IOCHCHK-
WDO-
DIGIO1
MR-
VBATT
DSKCHG
HDSEL
RDATA-
WRPRT-
TRK0
WGATE-
WDATA-
STEP-
DIR
DRV0-
MTR0-
INDEX-
DASP-
HDCS1-
HDCS0-
HDA2
HDA0
HDA1
IOCS16-
HDIRQ
HDALE
HDIOR-
HDIOW-
HDD[0:6]
IDED7
HDD[8:15]
HDRESET-
CASL1-
CASH1-
CASL2-
CASH2-
DRWE-
RAS1-
RAS2-
D[0:15]
MAD[0:11]
TP256
TP257
TP258
TP259
TP260
TP261
TP262
TP263
TP264
TP265
TP266
TP267
TP268
TP269
TP270
TP271
TP236
TP237
TP238
TP239
TP240
TP241
TP242
TP243
TP244
TP245
TP246
TP247
TP248
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TP250
TP251
TP252
TP9
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TP60
TP190
TP191
TP192
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TP212
TP213
TP214
TP215
TP216
TP217
TP256
TP257
TP258
TP259
TP260
TP261
TP262
TP263
TP264
TP265
TP266
TP267
TP268
TP269
TP270
TP271
ZF MicroSystems, Inc.
1052 Elwell Court
Palo Alto, CA, 94303
(650) 965-3800
Title
104\VGA\NET: CPU
Size
C
Document nr
104_VGA_NET.DSN
ZF nr
8800-0025-00
Rev
4
Date:
Friday, March 26, 1999
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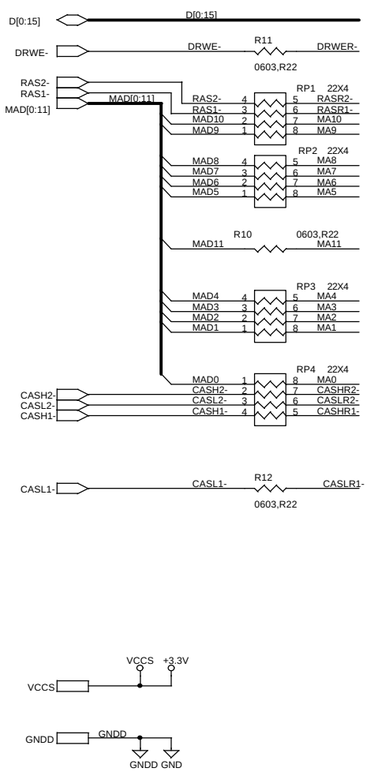

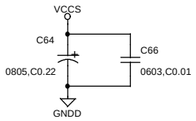

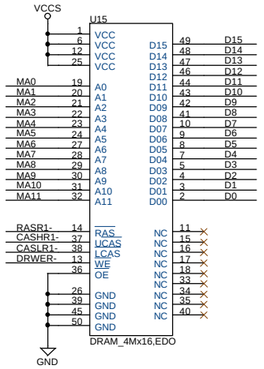

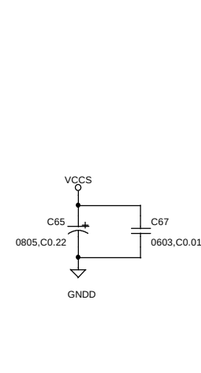

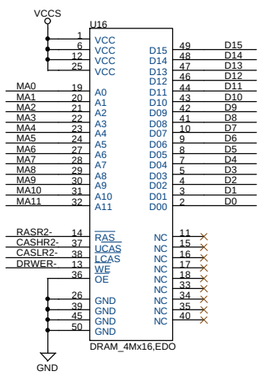

M1 MTHOLE3
MD1 FIDUCIAL
MD2 FIDUCIAL
MD3 FIDUCIAL
MD4 FIDUCIAL
MD5 FIDUCIAL
MD6 FIDUCIAL
MD7 FIDUCIAL
MD8 FIDUCIAL

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Title			
104\VGA\NET: DRAM			
Size: C	Document nr: 104_VGA_NET.DSN	ZF nr: 8800-0025-00	Rev: 4
Date: Wednesday, March 24, 1999		Sheet 3 of 5	

65545
Flat Panel VGA Controller

DRAM "A" Display Memory Lower 512KB

DRAM "B" Display Memory Upper 512KB

DRAM "C" Frame Buffer or 24-Bit PC-Video Interface

Panel Interface Group

Bus Interface Group

Clock Group

DAC Group

Configuration Pins
2X# = 0 2X LCLK
OS# = 0 External Oscillator (1=Xtal)
AD# = 0 ENABKL & ACTI are A26,A27
TS# = 0 Enable Clock Test Mode
LV# = 0 Input Threshold Level Control

DIGIO1 (RTCIRQ- GPIO_20)
OFF - WD DISABLED
ON - WD ENABLED

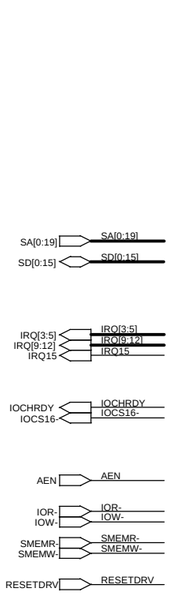
Keep 0.08" space between SHFCLK and others

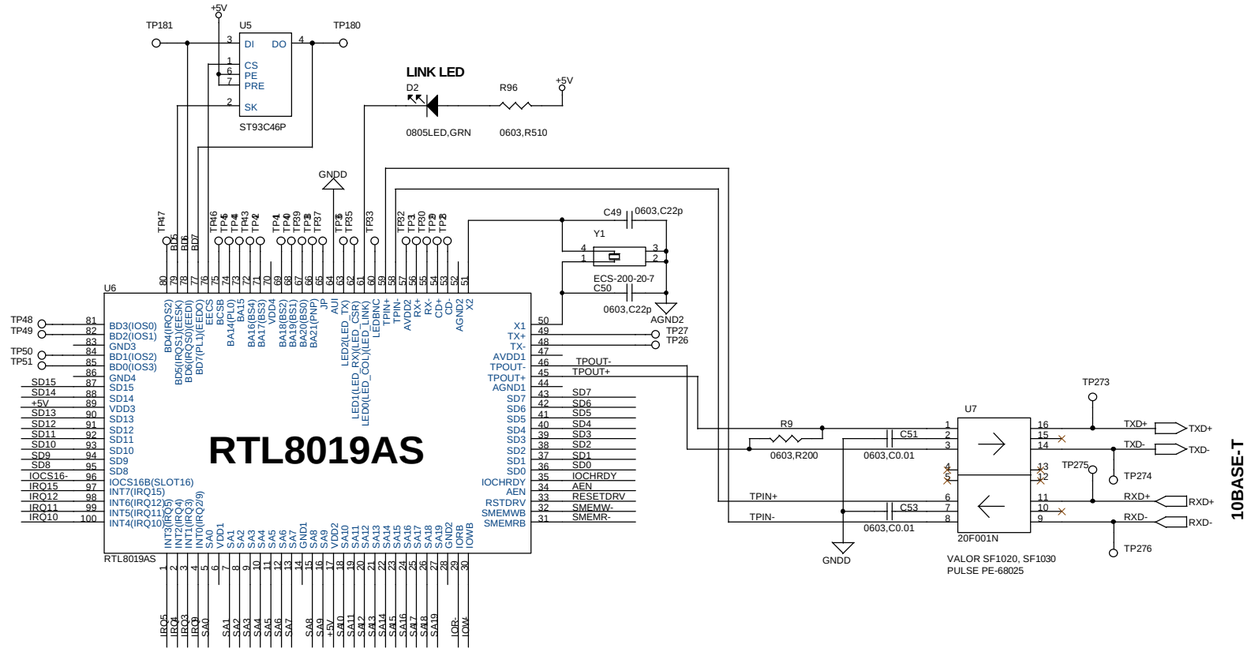
PANEL_INTERFACES

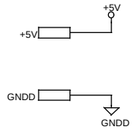
VGA

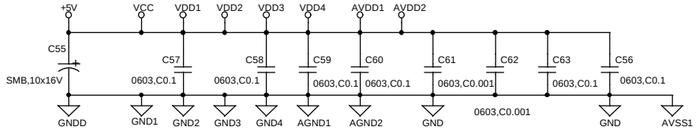
ZF MicroSystems, Inc.
1052 Elwell Court
Palo Alto, CA, 94303
(650) 965-3800

Title			
104\VGA\NET: VGA			
Size: C	Document nr: 104_VGA_NET.DSN	ZF nr: 8800-0025-00	Rev: 4
Date: Wednesday, March 24, 1999	Sheet 4 of 5		









ZF MicroSystems, Inc.		1052 Elwell Court Palo Alto, CA, 94303 (650) 965-3800	
Title: 104\VGA\NET: NETWORK			
Size: C	Document nr: 104_VGA_NET.DSN	ZF nr: 8800-0025-00	Rev: 4
Date: Wednesday, March 24, 1999		Sheet 5 of 5	